

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of: :
Robert C. GETTS et al. :
Application No.: 09/908,950 : Group Art Unit: 1637
Filed: July 19, 2001 : Examiner: Chunduru, Suryaprabha
For: METHODS FOR DETECTING : Confirmation No.: 1927
AND ASSAYING NUCLEIC :
ACID SEQUENCES :
X

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

COMMUNICATION RE: NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF
INCLUDING REPLACEMENT FOR A DEFECTIVE APPEAL BRIEF SECTION

This paper is being submitted in response to the Notification of Non-Compliant Appeal Brief dated April 29, 2010 (“the Notification”) in the above-identified application. The one month period for reply expired on May 29, 2010. Accordingly, this paper is being filed with a Petition for Extension of Time for four months.

Please replace the “Status of Claims” section of the Appeal Brief filed April 20, 2010 with the attached.

Dated: September 24, 2010

Respectfully submitted,

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SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter encompasses devices for use in assays. Independent claim 1 is directed to a method for determining the presence of a specific nucleotide sequence in RNA of a target sample, comprising the steps of:

- a) incubating a mixture comprising: (*page 7, line 7*)
 - (i) a first component including RNA extracted from a target sample, said RNA having a target nucleotide sequence and a capture sequence, (*page 7, line 8-10*) and
 - (ii) a second component comprising a capture reagent, said capture reagent comprising multiple first arms and multiple second arms, said first arms being arms comprising a label capable of emitting a detectable signal, said second arms being arms comprising a nucleotide sequence complementary to the capture sequence of said RNA of the first component, (*page 7, lines 11-14*) at a first temperature to induce the capture sequence of said RNA of the first component to bind to the complementary nucleotide sequence of the capture reagent of the second component, and thereby forming a pre-hybridized RNA-capture reagent complex comprising the target nucleotide sequence; (*page 7, lines 15-19*)
- b) contacting the pre-hybridized RNA-capture reagent complex with a microarray having thereon a plurality of features each comprising a particular probe nucleotide sequence; (*page 7, lines 20-22*) and

c) incubating the pre-hybridized RNA-capture reagent complex on the microarray at a second temperature to hybridize the target nucleotide sequence of the pre-hybridized RNA capture reagent complex to the complementary probe nucleotide sequence contained within the feature, wherein the presence of such hybridization results in a detectable hybridization pattern for subsequent analysis. (*page 7, line 23 to page 8, line 6*)

Independent claim 19 is directed to a method for determining the presence of a specific nucleotide sequence in RNA of a target sample, said method comprising the steps of:

- a) contacting a first component with a microarray having thereon a plurality of features each comprising a particular probe nucleotide sequence, said first component including RNA extracted from a target sample, said RNA having a target nucleotide sequence and a capture sequence; (*page 8, lines 11-14*)
- b) incubating said RNA and the complementary probe nucleotide sequences on the microarray at a first temperature to hybridize the target nucleotide sequence of said RNA to the complementary probe nucleotide sequence contained within the feature; (*page 8, lines 15-18*)
- c) taking a second component comprising a capture reagent, said capture reagent comprising multiple first arms and multiple second arms, said first arms being arms comprising a label capable of emitting a detectable signal, said second arms being arms

comprising a nucleotide sequence complementary to the capture sequence of said RNA of the first component; (*page 8, lines 19-22*)
and

d) incubating the capture reagent and the capture sequence of said RNA at a second temperature to induce the capture sequence of said RNA of the first component to hybridize to the complementary nucleotide sequence of the capture reagent of the second component, wherein the presence of the hybridization results in a detectable hybridization pattern for subsequent analysis. (*page 8, line 22 to page 9, line 6*)

Independent claim 47 is directed to a method comprising the steps of:

- (a) taking an array of probe nucleotide sequences; (*pages 14, lines 18-22; Fig. 2, "microarray"*)
- (b) taking a first component comprising RNA, said RNA having a target nucleotide sequence and a capture sequence; (*pages 14, lines 18-22; Fig. 2, "mRNA"*)
- (c) taking a second component comprising multiple arms, said arms each comprising a complement, said complement being a complementary nucleotide sequence to said capture sequence of said RNA; (*pages 14, lines 18-22; Fig. 2, "dendrimer fluorescent probe"*)

- (d) contacting said RNA with both said array and said second component in any order; (*pages 14, lines 18-22; Fig. 2, "mRNA/dendrimer hybridization"*)
- (e) wherein said RNA is contacted with said array to allow said target nucleotide sequence of said RNA to bind to any of said probe nucleotide sequences on said array that comprise DNA or RNA complementary to said target nucleotide sequence; (*page 14, lines 18-22; Fig. 2, "mRNA/dendrimer hybridization"*)
- (f) wherein said RNA is contacted with said second component to allow said complement to bind to said capture sequence of said RNA; (*page 14, line 22 to page 15, line 1; Fig. 2, "mRNA/dendrimer hybridization"*) and
- (g) wherein said second component produces a detectable hybridization pattern on said array. (*page 14, line 24 to page 15, line 7; Fig. 2, "wash then scan microarray"*)

Independent claim 52 is directed to a composition comprising:

- (a) an array of probe nucleotide sequences; (*pages 14, lines 18-22; Fig. 2, "microarray"*)
- (b) said array further comprising a first component comprising RNA, said RNA having a target nucleotide sequence and a capture sequence, said target nucleotide sequence of said RNA being bound to one of said probe nucleotide sequences on said array, wherein said target sequence of said RNA is bound to a probe

nucleotide sequence of DNA or RNA; (*page 14, line 22 to page*

15, line 1; Fig. 2, "mRNA")

(c) said composition further comprising a second component, said second component comprising multiple arms, said arms each comprising a complementary nucleotide sequence to said capture sequence of said RNA, said complementary nucleotide sequence being bound to said capture sequence; (*page 14, line 22 to page 15,*

line 1; Fig. 2, "mRNA/dendrimer hybridization") and

(d) wherein said second component further comprises a label.

(page 15, lines 9-14; Fig. 2, "dye")

The dependent claims are directed to various embodiments of the disclosed methods and compositions.

A copy of the appealed claims is appended hereto, beginning at page 22.